STIC Search Report
EIC 2100

STIC Database Tracking Number: 169068

TO: Than-Ha Dang
Location: RND-3B15

Art Unit: 2163
Wednesday, December 21, 2005
Case Serial Number: 10/070,088

From: Lance Sealey
Location: EIC 2100
RND-4B11
Phone: 571-272-8666

Lance.Sealey@uspto.gov

Search Notes

Dear Than-Ha,

Here are the results of your search request.
Please let me know if you have any questions.

Lance

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Set     Items   Description
S1          0   AU=((PETZOLD B? OR PETZOLD, B?) AND (HESSING B? OR HESSING,
              B?) AND (HAHLWEG C? OR HAHLWEG, C?) AND (DRAEGER G? OR DRAEG-
              ER, G?) AND (KERSKEN U? OR KERSKEN, U?) AND (KREFT P? OR KREF-
              T, P?) AND (MARTIN J? OR MARTIN, J?))
S2          3   (AU=(PETZOLD B? OR PETZOLD, B? OR HESSING B? OR HESSING, B?
              OR HAHLWEG C? OR HAHLWEG, C? OR DRAEGER G? OR DRAEGER, G? OR
              KERSKEN U? OR KERSKEN, U? OR KREFT P? OR KREFT, P? OR MARTIN -
              J? OR MARTIN, J?)) AND (PY<1999 OR PD<19980907) AND TELEMATICS
? show files
File   2:INSPEC 1898-2005/Dec W2
         (c) 2005 Institution of Electrical Engineers
File   6:NTIS 1964-2005/Dec W2
         (c) 2005 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2005/Dec W2
         (c) 2005 Elsevier Eng.  Info. Inc.
File  34:SciSearch(R) Cited Ref Sci 1990-2005/Dec W2
         (c) 2005 Inst for Sci Info
File  65:Inside Conferences 1993-2005/Dec W3
         (c) 2005 BLDSC all rts. reserv.
File  94:JICST-EPlus 1985-2005/Oct W3
         (c)2005 Japan Science and Tech Corp(JST)
File  99:Wilson Appl. Sci & Tech Abs 1983-2005/Oct
         (c) 2005 The HW Wilson Co.
File 148:Gale Group Trade & Industry DB 1976-2005/Dec 20
         (c)2005 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2005/Dec 20
         (c) 2005 The Gale Group
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2/5/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04980760 E.I. No: EIP98034134409
Title: Dynamic route guidance - different approaches to the system concepts
Author: Blischke, Frank; **Hessing, Bernd**
Corporate Source: Robert Bosch GmbH
Conference Title: Proceedings of the 1998 SAE International Congress & Exposition
Conference Location: Detroit, MI, USA Conference Date: 19980223-19980226
E.I. Conference No.: 48132
Source: ITS Advanced Controls and Vehicle Navigation Systems SAE Special Publications v 1332 Feb 1998. SAE, Warrendale, PA, USA. p 1-5 980603
Publication Year: 1998
CODEN: SAESA2
Language: English
Document Type: CA; (Conference Article) Treatment: A; (Applications)
Journal Announcement: 9805W3
Abstract: In principle, system concepts for dynamic route guidance can rely on centrally or mobile calculated routes. While the first approach lacks comfort, the second one leads to expensive on-board equipment. Both result in a high volume of communication. The way to fulfill customer expectations is a hybrid system where information gathering and strategic processing are centrally based. The on-board equipment is an enhanced car navigation system which provides tactical dynamic route guidance as a key feature of the system. The resulting complete dynamic route guidance system is comfortable, affordable and individual.
Descriptors: *Electronic guidance systems; Man machine systems; Data transfer; Broadcasting; Network protocols; Global positioning system; Algorithms; Navigation systems; Computer systems
Identifiers: Digital audio broadcast; Global automotive **telematics** standard; Car navigation systems; Intelligent traffic guidance system
Classification Codes:
715.1 (Electronic Equipment, non-communication); 723.2 (Data Processing); 716.3 (Radio Systems & Equipment); 722.4 (Digital Computers & Systems)
715 (General Electronic Equipment); 723 (Computer Software); 716 (Radar, Radio & TV Electronic Equipment); 722 (Computer Hardware)
71 (ELECTRONICS & COMMUNICATIONS); 72 (COMPUTERS & DATA PROCESSING)

2/5/3 (Item 1 from file: 65)
DIALOG(R)File 65:Inside Conferences

00892574 INSIDE CONFERENCE ITEM ID: CN008698971
The ACCEPT Project towards Implementation of a European RDS-TMC Service
Broeders, W. P. B.; De Groot, M. T.; Katteler, H.; **Kersken, U.**
CONFERENCE: Towards an intelligent transport system-1st World congress on applications of transport telematics and intelligent vehicle-highway systems
P: 2706-2713
Artech House, **1994**
ISBN: 0890068100; 0890068259
LANGUAGE: English DOCUMENT TYPE: Conference Papers
CONFERENCE LOCATION: Paris
CONFERENCE DATE: Nov 1994 (199411) (199411)

BRITISH LIBRARY ITEM LOCATION: 95/05782 Towards
NOTE:
In 6 vols
DESCRIPTORS: transport **telematics** ; intelligent vehicle highway systems; intelligent transport system

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S2     107658   DECOD??? OR UNENCOD??? OR UNCOD??? OR DEENCOD??? OR DESCRA-
             MBL??? OR UNSCRAMBL???
S3    1417253   REFERENCE OR POINTER? ? OR INDEX?? OR IDENTIFIER? ? OR LOC-
             ATOR? ? OR MARKER? ? OR INDICATOR? ? OR REFERENTIAL OR ASSOCI-
             ATING? ? OR ASSOCIATIVE OR RELATIONAL OR RELATIONSHIP OR LOCA-
             TION OR COORDINATE
S4    1691923   POSITION?? OR GEOGRAPHIC OR ID? ? OR TAG? ? OR IDENTIFY???
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             ATOR? ?
S5    1665785   OBJECT? ? OR COMPONENT? ? OR ELEMENT? ?
S6     685056   ROUTE? ? OR PATH? ? OR PATHWAY? ? OR STREET? ? OR ROAD? ? -
             OR HIGHWAY? ? OR MAP? ?
S7    2004842   VERIFY??? OR VERIFI?????? OR CHECK??? OR COMPAR???? OR VAL-
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S8     972048   FIND??? OR FOUND OR MATCH???
S9    1111385   STOR??? OR SAVE OR SAVING OR SAVED OR RECORD??? OR KEEP???
             OR KEPT OR MEMORY OR COPY OR COPIES
S10   1354882   SOURCE OR BEGIN???? OR ORIGIN OR START OR STARTING OR COMM-
             ENCE???? OR ONSET OR INITIAL
S11   1285607   DESTINATION OR END OR TERMINAL
S12    393014   TRANSMITTER? ? OR TRANSPONDER? ? OR RESPONDER? ? OR REPEAT-
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             THERED OR INFRARED OR MICROWAVE OR RADAR
S13    119459   RADIO()WAVE? ? OR REMOTE()CONTROL OR IRLAP OR IRLMP OR (BL-
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S14         17   TRAFFIC()TELEMATICS
S15       8123   S1(3N)(S3 OR S4)(3N)S5
S16        113   (S12 OR S13)(3N)S10(3N)S5(3N)S11
S17        950   S2(3N)(S3 OR S4)(3N)S5
S18       8421   (S7 OR S8)(3N)S5(3N)S9
S19        558   S9(3N)S5(3N)("NOT" OR T)(3N)S8
S20          0   S15(100N)S16(100N)S17(100N)S18(100N)S19
S21         71   (S16 AND AY=(1980:1998)) NOT S14
S22          6   S15(100N)S17(100N)S18(100N)S19
S23         19   (S15(100N)S17(100N)S18) NOT (S14 OR S21:S22)
S24          0   (S15(100N)S17(100N)S19) NOT (S14 OR S21:S23)
S25         20   (S15(100N)S18(100N)S19) NOT (S14 OR S21:S23)
S26        193   (S15(100N)S17) NOT (S14 OR S21:S23 OR S25)
S27         14   S26 AND (IC=(H04H-001/00) OR IC=(G01C-021/00) OR IC=(G01C--
               021/04) OR IC=(G08G-001/09) OR IC=(G06F-007/00) OR IC=(G06F-0-
               17/00) OR IC=(G06F-017/30) OR IC=(G06F-012/00))
S28         11   S26 AND (IC=(H04H-001?) OR IC=(G01C-021?) OR IC=(G08G-001?)
                OR IC=(G06F-007?) OR IC=(G06F-017?) OR IC=(G06F-012?)) NOT (-
               S14 OR S21:S23 OR S25 OR S27)
S29        312   (S18(100N)S19) NOT (S14 OR S21:S23 OR S25 OR S27:S28)
S30         50   S29 AND (IC=(H04H-001/00) OR IC=(G01C-021/00) OR IC=(G01C--
               021/04) OR IC=(G08G-001/09) OR IC=(G06F-007/00) OR IC=(G06F-0-
               17/00) OR IC=(G06F-017/30) OR IC=(G06F-012/00)) NOT (S14 OR S-
               21:S23 OR S25 OR S27:S28)
S31         16   S30 AND AY=(1980:1998)
S32        373   (S18 AND (IC=(H04H-001/00) OR IC=(G01C-021/00) OR IC=(G01C-
               -021/04) OR IC=(G08G-001/09) OR IC=(G06F-007/00) OR IC=(G06F--
               017/00) OR IC=(G06F-017/30) OR IC=(G06F-012/00)) AND AY=(1980-
               :1998)) NOT (S14 OR S21:S23 OR S25 OR S27:S28 OR S31)
S33          1   S32 AND S6/TI
S34          4   (S19 AND (IC=(H04H-001/00) OR IC=(G01C-021/00) OR IC=(G01C-
               -021/04) OR IC=(G08G-001/09) OR IC=(G06F-007/00) OR IC=(G06F--
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            017/00) OR IC=(G06F-017/30) OR IC=(G06F-012/00)) AND AY=(1980-
            :1998)) NOT (S14 OR S21:S23 OR S25 OR S27:S28 OR S31 OR S33)
S35      1123   ((S12 OR S13)(10N)S10(10N)S5(10N)S11) NOT (S14 OR S21:S23 -
            OR S25 OR S27:S28 OR S31 OR S33)
S36         8   (S35 AND (IC=(H04H-001/00) OR IC=(G01C-021/00) OR IC=(G01C-
            -021/04) OR IC=(G08G-001/09) OR IC=(G06F-007/00) OR IC=(G06F--
            017/00) OR IC=(G06F-017/30) OR IC=(G06F-012/00)) AND AY=(1980-
            :1998)) NOT (S14 OR S21:S23 OR S25 OR S27:S28 OR S31 OR S33:S-
            34)
S37         0   (S36 AND (IC=(H04H-001?) OR IC=(G01C-021?) OR IC=(G08G-001-
            ?) OR IC=(G06F-007?) OR IC=(G06F-017?) OR IC=(G06F-012?))) NOT
             (S14 OR S21:S23 OR S25 OR S27:S28 OR S31 OR S33:S34 OR S36)
S38         0   (S36 AND (IC=(H04H) OR IC=(G01C) OR IC=(G08G) OR IC=(G06F)-
            )) NOT (S14 OR S21:S23 OR S25 OR S27:S28 OR S31 OR S33:S34 OR
            S36)
S39      4433   (S9(10N)S5(10N)("NOT" OR T)(10N)S8) NOT (S14 OR S21:S23 OR
            S25 OR S27:S28 OR S31 OR S33:S34 OR S36)
S40       132   S39 AND (IC=(H04H-001/00) OR IC=(G01C-021/00) OR IC=(G01C--
            021/04) OR IC=(G08G-001/09) OR IC=(G06F-007/00) OR IC=(G06F-0-
            17/00) OR IC=(G06F-017/30) OR IC=(G06F-012/00)) AND AY=(1980:-
            1998)
? show files
File 348:EUROPEAN PATENTS 1978-2005/Dec W02
         (c) 2005 European Patent Office
File 349:PCT FULLTEXT 1979-2005/UB=20051215,UT=20051208
         (c) 2005 WIPO/Univentio
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Set     Items   Description
S1          3   AU=((PETZOLD B? OR PETZOLD, B?) AND (HESSING B? OR HESSING,
              B?) AND (HAHLWEG C? OR HAHLWEG, C?) AND (DRAEGER G? OR DRAEG-
              ER, G?) AND (KERSKEN U? OR KERSKEN, U?) AND (KREFT P? OR KREF-
              T, P?) AND (MARTIN J? OR MARTIN, J?))
S2          4   (AU=(PETZOLD B? OR PETZOLD, B? OR HESSING B? OR HESSING, B?
              OR HAHLWEG C? OR HAHLWEG, C? OR DRAEGER G? OR DRAEGER, G? OR
              KERSKEN U? OR KERSKEN, U? OR KREFT P? OR KREFT, P? OR MARTIN -
              J? OR MARTIN, J?)) AND AY=(1980:1998) AND TELEMATICS
? show files
File 347:JAPIO Nov 1976-2005/Jul(Updated 051102)
         (c) 2005 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2005/Dec W02
         (c) 2005 European Patent Office
File 349:PCT FULLTEXT 1979-2005/UB=20051215,UT=20051208
         (c) 2005 WIPO/Univentio
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200581
         (c) 2005  Thomson Derwent
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1/5/3 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014046577 **Image available**
WPI Acc No: 2001-530790/200159
XRPX Acc No: N01-394019

Encoding and decoding road network objects, involves providing objects with relationships not originating primarily from network to relational object(s) in databases to be used for decoding

Patent Assignee: BOSCH GMBH ROBERT (BOSC)
Inventor: **DRAEGER G ; HAHLWEG C ; HESSING B ; KERSKEN U ;** 1KREFT P ; **MARTIN J ; PETZOLD B**

Number of Countries: 027 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 1920942522	A1	20010308	DE 199042522	A	19990907	200159	B
WO 200118768	A1	20010315	WO 2000DE3056	A	20000905	200159	
EP 1214697	A1	20020619	EP 2000963961	A	20000905	200240	
			WO 2000DE3056	A	20000905		
JP 2003509753	W	20030311	WO 2000DE3056	A	20000905	200319	
			JP 2001522506	A	20000905		
EP 1214697	B1	20040421	EP 2000963961	A	20000905	200428	
			WO 2000DE3056	A	20000905		
DE 5020006176	G	20040527	DE 2000506176	A	20000905	200436	
			EP 2000963961	A	20000905		
			WO 2000DE3056	A	20000905		

Priority Applications (No Type Date): DE 199042522 A 19990907
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 1920942522	A1		6	G06F-017/30	
WO 200118768	A1	G		G08G-001/09	
Designated States (National): JP US					
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
EP 1214697	A1	G		G08G-001/09	Based on patent WO 200118768
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 2003509753	W		24	G06F-017/30	Based on patent WO 200118768
EP 1214697	B1	G		G08G-001/09	Based on patent WO 200118768
Designated States (Regional): DE FR GB					
DE 5020006176	G			G08G-001/09	Based on patent EP 1214697
					Based on patent WO 200118768

Abstract (Basic): DE 19942522 A1

NOVELTY - The method involves providing the objects with relationships to at least one relational object present in databases to be used for decoding, whereby the relationships do not originate primarily from the road network.

USE - For encoding and decoding objects in connection with a road network, whereby the encoded information has to be decoded with the aid of databases different from the database used for encoding.

ADVANTAGE - Enables each object to be provide with attributes in a targeted manner without having to relay on the road network relationships and hence the database structure.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic representation of a method for point objects.

transmitter (1)
transmission system (2)
receiver (3)

pp; 6 DwgNo 2/5
Title Terms: ENCODE; DECODE; ROAD; NETWORK; OBJECT; OBJECT; RELATED; ORIGIN
; PRIMARY; NETWORK; RELATED; OBJECT; DECODE
Derwent Class: S02; T01; T07
International Patent Class (Main): G06F-017/30; G08G-001/09
International Patent Class (Additional): G01C-021/00; G01C-021/04;
G06F-012/00; H04H-001/00
File Segment: EPI
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S3    5535908   REFERENCE OR POINTER? ? OR INDEX?? OR IDENTIFIER? ? OR LOC-
            ATOR? ? OR MARKER? ? OR INDICATOR? ? OR REFERENTIAL OR  ASSOC-
            IATING? ? OR ASSOCIATIVE OR RELATIONAL OR RELATIONSHIP OR LOC-
            ATION OR COORDINATE
S4    9417861   POSITION?? OR GEOGRAPHIC OR ID? ? OR TAG? ? OR IDENTIFY???
            OR IDENTIFIC????? OR FLAG? ? OR NAME? ? OR NUMBER? ? OR INDIC-
            ATOR? ?
S5    7402093   OBJECT? ? OR COMPONENT? ? OR ELEMENT? ?
S6    3377848   ROUTE? ? OR PATH? ? OR PATHWAY? ? OR STREET? ? OR ROAD? ? -
            OR HIGHWAY? ? OR MAP? ?
S7    9839535   VERIFY??? OR VERIFI?????? OR CHECK??? OR COMPAR???? OR VAL-
            IDAT??? OR SEARCH???? OR QUERY???? OR QUERI???? OR RETRIEV???
S8    7342124   FIND??? OR FOUND OR MATCH???
S9    6068695   STOR??? OR SAVE OR SAVING OR SAVED OR RECORD??? OR KEEP???
            OR KEPT OR MEMORY OR COPY OR COPIES
S10   5996222   SOURCE OR BEGIN???? OR ORIGIN OR START OR STARTING OR COMM-
            ENCE???? OR ONSET OR INITIAL
S11   2410994   DESTINATION OR END OR TERMINAL
S12   2584624   TRANSMITTER? ? OR TRANSPONDER? ? OR RESPONDER? ? OR REPEAT-
            ER? ? OR TRANSCEIVER? ? OR BLUETOOTH? ? OR RF OR IR OR IRDA OR
             CABLELESS OR CABLE()FREE OR CORDLESS OR "NOT"()WIRED OR UNTE-
            THERED OR INFRARED OR MICROWAVE OR RADAR
S13    529642   RADIO()WAVE? ? OR REMOTE()CONTROL OR IRLAP OR IRLMP OR (BL-
            ACK OR BLUE)()BERRY OR WIRELESS OR WIRE()LESS OR WIFI OR BLUE-
            TOOTH OR WAP OR BLUE()TOOTH
S14       201   TRAFFIC()TELEMATICS
S15   1679045   S12 AND (PY<1999 OR PD<19980907)
S16       103   S14 AND (PY<1999 OR PD<19980907)
S17      2473   S1(3N)(S3 OR S4)(3N)S5
S18        18   (S12 OR S13)(3N)S10(3N)S5(3N)S11
S19        52   S2(3N)(S3 OR S4)(3N)S5
S20      4203   (S7 OR S8)(3N)S5(3N)S9
S21       117   S9(3N)S5(3N)("NOT" OR T)(3N)S8
S22         0   S17 AND S18 AND S19 AND S20 AND S21
S23        75   S21 AND (PY<1999 OR PD<19980907)
S24       146   ((S9(5N)S5(5N)("NOT" OR T)(5N)S8) AND (PY<1999 OR PD<19980-
            907)) NOT S23
S25        35   S24 AND (S3 OR S5 OR S6)/TI
? show files
File   2:INSPEC 1898-2005/Dec W2
         (c) 2005 Institution of Electrical Engineers
File   6:NTIS 1964-2005/Dec W2
         (c) 2005 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2005/Dec W2
         (c) 2005 Elsevier Eng.  Info. Inc.
File  34:SciSearch(R) Cited Ref Sci 1990-2005/Dec W2
         (c) 2005 Inst for Sci Info
File  35:Dissertation Abs Online 1861-2005/Nov
         (c) 2005 ProQuest Info&Learning
File  56:Computer and Information Systems Abstracts 1966-2005/Dec
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File  57:Electronics & Communications Abstracts 1966-2005/Dec
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File  60:ANTE: Abstracts in New Tech & ENGINEER 1966-2005/NOV
         (c) 2005 CSA.
File  65:Inside Conferences 1993-2005/Dec W3
         (c) 2005 BLDSC all rts. reserv.
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File  94:JICST-EPlus 1985-2005/Oct W3
         (c)2005 Japan Science and Tech Corp(JST)
File  95:TEME-Technology & Management 1989-2005/Nov W2
         (c) 2005 FIZ TECHNIK
File  99:Wilson Appl. Sci & Tech Abs 1983-2005/Oct
         (c) 2005 The HW Wilson Co.
File 111:TGG Natl.Newspaper Index(SM) 1979-2005/Dec 20
         (c) 2005 The Gale Group
File 144:Pascal 1973-2005/Dec W2
         (c) 2005 INIST/CNRS
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
File 636:Gale Group Newsletter DB(TM) 1987-2005/Dec 21
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             ATOR? ? OR MARKER? ? OR INDICATOR? ? OR REFERENTIAL OR  ASSOC-
             IATING? ? OR ASSOCIATIVE OR RELATIONAL OR RELATIONSHIP OR LOC-
             ATION OR COORDINATE
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             OR IDENTIFIC????? OR FLAG? ? OR NAME? ? OR NUMBER? ? OR INDIC-
             ATOR? ?
S5    5633064   OBJECT? ? OR COMPONENT? ? OR ELEMENT? ?
S6    7262870   ROUTE? ? OR PATH? ? OR PATHWAY? ? OR STREET? ? OR ROAD? ? -
             OR HIGHWAY? ? OR MAP? ?
S7   10648340   VERIFY??? OR VERIFI?????? OR CHECK??? OR COMPAR???? OR VAL-
             IDAT??? OR SEARCH???? OR QUERY???? OR QUERI???? OR RETRIEV???
S8   10162523   FIND??? OR FOUND OR MATCH???
S9   18621528   STOR??? OR SAVE OR SAVING OR SAVED OR RECORD??? OR KEEP???
             OR KEPT OR MEMORY OR COPY OR COPIES
S10      4904   S1(3N)(S3 OR S4)(3N)S5
S11        61   (TRANSMITTER? ? OR TRANSPONDER? ? OR RESPONDER? ? OR REPEA-
               TER? ? OR TRANSCEIVER? ? OR BLUETOOTH? ? OR RF OR IR OR IRDA -
               OR CABLELESS OR CABLE()FREE OR CORDLESS OR "NOT"()WIRED OR UN-
               TETHERED OR INFRARED OR MICROWAVE OR RADAR OR RADIO()WAVE? ? -
               OR REMOTE()CON
S12        65   S2(3N)(S3 OR S4)(3N)S5
S13      7562   (S7 OR S8)(3N)S5(3N)S9
S14       462   S9(3N)S5(3N)("NOT" OR T)(3N)S8
S15         0   S10(100N)S11(100N)S12(100N)S13(100N)S14
S16         0   (TRAFFIC()TELEMATICS) AND (S11 OR S13 OR S14)
S17         0   S11(100N)S13(100N)S14
S18         0   S11(100N)S13
S19         0   S11(100N)S14
S20       200   S13(100N)S14
S21         2   S20 AND S6/TI
S22        42   S14 AND (S3 OR S5 OR S6)/TI
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File 275:Gale Group Computer DB(TM) 1983-2005/Dec 21
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File  47:Gale Group Magazine DB(TM) 1959-2005/Dec 21
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File  16:Gale Group PROMT(R) 1990-2005/Dec 21
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File 624:McGraw-Hill Publications 1985-2005/Dec 21
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File 484:Periodical Abs Plustext 1986-2005/Dec W2
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File 613:PR Newswire 1999-2005/Dec 21
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File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 239:Mathsci 1940-2005/Jan
         (c) 2005 American Mathematical Society
File 370:Science 1996-1999/Jul W3
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File 696:DIALOG Telecom. Newsletters 1995-2005/Dec 20
         (c) 2005 Dialog
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File 369:New Scientist 1994-2005/Aug W2
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File 160:Gale Group PROMT(R) 1972-1989
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File 635:Business Dateline(R) 1985-2005/Dec 21
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File   9:Business & Industry(R) Jul/1994-2005/Dec 20
         (c) 2005  The Gale Group
File  13:BAMP 2005/Dec W2
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         (c) 2005 CMP Media, LLC
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File 634:San Jose Mercury  Jun 1985-2005/Dec 18
         (c) 2005 San Jose Mercury News
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```

S11 61 (TRANSMITTER? ? OR TRANSPONDER? ? OR RESPONDER? ? OR REPEATER? ? OR TRANSCEIVER? ? OR BLUETOOTH? ? OR RF OR IR OR IRDA OR CABLELESS OR CABLE()FREE OR CORDLESS OR "NOT"()WIRED OR UNTETHERED OR INFRARED OR MICROWAVE OR RADAR OR RADIO()WAVE? ? OR REMOTE()CONTROL OR IRLAP OR IRLMP OR (BLACK OR BLUE)()BERRY OR WIRELESS OR WIRE()LESS OR WIFI OR BLUETOOTH OR WAP OR BLUE()TOOTH)(3N)(SOURCE OR BEGIN???? OR ORIGIN OR START OR STARTING OR COMMENCE???? OR ONSET OR INITIAL)(3N)S5(3N)(DESTINATION OR END OR TERMINAL)

```
Set     Items   Description
S1     552030   ENCOD??? OR CODE? ? OR CODING
S2     175590   DECOD??? OR UNENCOD??? OR UNCOD??? OR DEENCOD??? OR DESCRA-
             MBL??? OR UNSCRAMBL???
S3    1333880   REFERENCE OR POINTER? ? OR INDEX?? OR IDENTIFIER? ? OR LOC-
             ATOR? ? OR MARKER? ? OR INDICATOR? ? OR REFERENTIAL OR  ASSOC-
             IATING? ? OR ASSOCIATIVE OR RELATIONAL OR RELATIONSHIP OR LOC-
             ATION OR COORDINATE
S4    4590984   POSITION?? OR GEOGRAPHIC OR ID? ? OR TAG? ? OR IDENTIFY???
             OR IDENTIFIC????? OR FLAG? ? OR NAME? ? OR NUMBER? ? OR INDIC-
             ATOR? ?
S5    4444767   OBJECT? ? OR COMPONENT? ? OR ELEMENT? ?
S6     883997   ROUTE? ? OR PATH? ? OR PATHWAY? ? OR STREET? ? OR ROAD? ? -
             OR HIGHWAY? ? OR MAP? ?
S7    1327647   VERIFY??? OR VERIFI?????? OR CHECK??? OR COMPAR???? OR VAL-
             IDAT??? OR SEARCH???? OR QUERY???? OR QUERI???? OR RETRIEV???
S8     471788   FIND??? OR FOUND OR MATCH???
S9    3914020   STOR??? OR SAVE OR SAVING OR SAVED OR RECORD??? OR KEEP???
             OR KEPT OR MEMORY OR COPY OR COPIES
S10   1965517   SOURCE OR BEGIN???? OR ORIGIN OR START OR STARTING OR COMM-
             ENCE???? OR ONSET OR INITIAL
S11   3377616   DESTINATION OR END OR TERMINAL
S12    559352   TRANSMITTER? ? OR TRANSPONDER? ? OR RESPONDER? ? OR REPEAT-
             ER? ? OR TRANSCEIVER? ? OR BLUETOOTH? ? OR RF OR IR OR IRDA OR
              CABLELESS OR CABLE()FREE OR CORDLESS OR "NOT"()WIRED OR UNTE-
             THERED OR INFRARED OR MICROWAVE OR RADAR
S13    179106   RADIO()WAVE? ? OR REMOTE()CONTROL OR IRLAP OR IRLMP OR (BL-
             ACK OR BLUE)()BERRY OR WIRELESS OR WIRE()LESS OR WIFI OR BLUE-
             TOOTH OR WAP OR BLUE()TOOTH
S14          7   TRAFFIC()TELEMATICS
S15       5394   S1(3N)S3(3N)S4
S16       1793   (S11 OR S12)(3N)S9(3N)S4(3N)S10
S17       1889   S2(3N)S3(3N)S4
S18       2915   (S6 OR S7)(3N)S4(3N)S8
S19        341   S8(3N)S4(3N)("NOT" OR T)(3N)S7
S20          0   S14 AND S15 AND S16 AND S17 AND S18
S21         64   S19 AND AY=(1980:1998) AND (S3 OR S4 OR S6)/TI
? show files
File 347:JAPIO Nov 1976-2005/Jul(Updated 051102)
         (c) 2005 JPO & JAPIO
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200581
         (c) 2005  Thomson Derwent
?
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14/3,K/13 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00393688 **Image available**
TRAFFIC TELEMATICS **SYSTEM**
SYSTEME TELEMATIQUE DE GESTION DE TRAFIC
Patent Applicant/Assignee:
DETEMOBIL DEUTSCHE TELEKOM MOBILNET GMBH,
Patent and Priority Information (Country, Number, Date):
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TRAFFIC TELEMATICS **SYSTEM**
Fulltext Availability:
Detailed Description
Claims
English Abstract
A **traffic telematics** system is disclosed which is characterized in that the **traffic telematics** system contains one or more subsystems, in particular at least one communication subsystem and/or...

Detailed Description
Traffic Telematics System
Telematics is going to be a growth market for mobile communication; predictions for the...

...of traffic steadily increases. The aim is to introduce at the earliest possible point a **traffic telematics** system which is both flexible and open to incorporate future developments. This system should possess...

...navigation systems, as any other kind of electromagnetic communication like even
SUBSTFUTE SHEET (RULE 26)
microwave or **infrared** can be used. As welt any kind of navigation will fit in the concept of...

...main investments in infrastructure have already been made, whereby the quick introduction of GSM based **traffic telematics** is guaranteed. It has to be stressed that the **traffic telematics** car terminals in particular can be used crossborder. The multi-functional design of these terminals...
...a wide variety of offers and additional services for prospective customers.

It is therefore an **object** of the present invention to provide a **traffic telematics** system with easily variable conception. According to one aspect of the present invention there is provided a **traffic telematics** system as proposed in claim 1. According to another aspect there is provided a method for use in a **traffic telematics** system as proposed in claim 4. The **traffic telematics** system contains one or more subsystems. Each of the subsystems can be designed to fulfil...

...conception of such a base system, subsystems and interfaces will be shown below more expicitely.

Object of Specification
As shown in fig. 1, this specification focuses especially on the functional description of the **terminal** platform as the connecting link between **terminal** production and applications. With this concept it will be possible to transfer applications to different...

...can be implemented into terminals by different manufacturers, hence making individual product design possible.
The **traffic telematics terminal** is a complete system which can be integrated into the vehicle.

The **traffic telematics** base **terminal** that this document specifies is the **terminal** without the parts belonging to the applications. The **terminal** platform includes subsystems, which are necessary for many **traffic telematics** applications, as well as the cross-section Routing + System Control and priority management. With respect to the architecture of the base **terminal** introduced in chaper 1.2 this specification establishes the base functions for the steering and...

...a standard for application sequences by addressing and using the base functions. Possible applications of **traffic telematics** are described in [4], [5], [6] and [9].

Moreover, the specification of the base functions does not have to define the hardware of the multi-functional base **terminal** . Neither the CPU nor the operating system nor the bus structure are being established, which is why the base functions will be incorporated into a muititude of integrated or modular **terminal** realizations. Consequently, it is not necessary for companies developing applications and services to acquire a ...
...technical knowledge about basic technologies and hardware construction.

The efficient transfer of applications to different **terminal** realizations is only possible on the basis of a standardization of the base functions.

Functional...is confined to addressing tasks, the system control undertakes the monitoring of functions and the **recording** of failures and errors.

With the help of the communication subsystem connections to the GSIVI...

...additional chipcard reading device can be impolemented to perform the additional function of processing a **traffic telematics** chipcard (see [8]), which can be a combination of GSM and **traffic telematics** chipcard. The chipcard's function is then primarily to support the **traffic telematics** applications [6]. The input/output unit supplies the user with information. He or she can moreover input information to control the base **terminal** . The SCI allows external periphery device access to as many functions of the base device...

...devices via the Standard Communications Interface (SCI) (see fig. 3). Via the SCI additional external **traffic telematics** applications can use the subsystems as well. Furthermore, FAX and data services will principally be...the device, which is why the base functions can be implemented both in an integrated **traffic telematics** base device and in a device made up of different **components** . The specification defines

the interface between a cross-section of **components** needed for **traffic telematics** and their functional requirements on the one hand and those **traffic telematics** applications that are based on defined functional sequences of their basic **components** on the other.

The following description gives one detailed example of the present invention claimed...

...functions.

They have an interface to the service applications (API interface) and use different hardware **components** such as GSM, GPS, chipcard reader, input/output devices etc, The base functions can be...

...for
the chipcard handling
Input/Output: This includes input/output functions for display and operating **elements** .

Furthermore, general functions are being provided
Routing + System Control The Routing organizes the flow of...

...26)
2,2 Functional Description
2.2,1 Base Functions of the Subsystem Communication
Many **traffic telematics** applications have in common the necessity for mobile communication. The Global System for Mobile Communication...the connection oriented Bearer Services with TASP4 (Telematic Applicatio'. Security Protocol, layer 4) an additional **end** -to- **end** protocol has been defined for the **save** transmission from the base device to the center. The subsystem commincation contains the following base...

...AT Command Access
3. Communications Service Table
4. Call Management
SUBSTRUTE SHEET (RULE 26)
5. **end** -to- **end** protocoll
Illustration 2 1 -1 shows the functional architecture of the subsystem commincation Illustration 2 1-1: Functional Architecture of the subsystem commincation Certain data services for **traffic telematics** applications are recommended for use within the GSM network, these include Teleservice 21 (SMS-MT...

...message.

An application can choose between different data services when communicating with its center. The **terminal** application has to be informed via the center, which data service is to be preferred...

...guarantee that the preferred data service is locally available, a Communications Service Table (CST) is **kept** by the subsystem cornmincation. The table's purpose is to **record** the success (or lack of it) in trying to contact a certain service; it is...

...any doubts the trial and error method is being applied.

The Communications Service Table also **records** which data services are supported by the base device. It can then inform the application... handling mechanism is designed to deal with problems concerning the GSM connection handling. The TASP4 **end** -to- **end** protocol is implemented

into the subsystem cornmincation, which, if the Bearer Services (transparent and non-transparent) are used, guarantees a **save** data transfer between base device and service center (see illustration 2 1.-2).

Illustration 2 1-2: **Components** of Communication between base **terminal** and center Besides using the GSM module indirectly with the aid of basic function commands , there will also be direct access to the module. **Traffic telematics** applications will always gain access indirectly by using the appropriate base function commands.

Applications for...

...responsibility to update the number if necessary.

Dialog Sequence
Both the service center and the **terminal** application can **start** a dialog. If, for example, there are messages to be send to a service center or information is to be requested from the sevice center, the **terminal** application starts a dialog. The dialog structure is more or less the
SUBSTRUTE SHEET (RULE...
...dialog sequence for line oriented connection which has been initiated by an application in the **terminal** . While the dialog sequence in the base device is unchangeable, the service center sequence can...

...1-3: GSM dialog sequence of a Bearer Services (connection oriented), initia
ted by the **terminal** application with an example sequence in the service center
The individual requests and messages are...Identifier (asi), for example, are important parameters. There is a common European standard for every **traffic telematics** service. If line oriented connections are concerned, the setup of the physical connection via an...

...in the case of these services the SMS center supports a secure connection, the TASP4 **end** -to- **end** protocol (which will be described later on) does not need to be used. The request...

...handled differently by connection oriented services and packet oriented services. Because Bearer Services employ the **end** -to- **end** protocol, this protocol confirms the reception to the sender. As for the Short Message Service...
...reception is confirmed by the SMS center without the message having been transferred to the **traffic telematics** center.

SUBSTMITE SHEE7 (RULE 26)
If a confirmation by the application becomes necessary because of...

...period of time or if the connection exceeds the defined maximum length this will be **recorded** (Watchdog Function) and a disconnection will be initiated by the base function. If a request...

...of the logical channel between application and base function immediatly follows the connection cleardown. The **end** -to- **end** protocol informs the center about the cleardown and the center then confirms this.

A dialog...data transfer remains unchanged; in the third phase the logical channel is closed. Is the **end** -to- **end** protocol in use, the base function sends the message ,gsm-close-ind" only if the **end** -to- **end**

connection is activated. In the case of the Short Message Service the call management initiates...

...the subsystem by the priority management function. The priority of each new communication request is **compared** with running communications. If a transmission request with a higher priority is registered, the existing ...

...closed. At the same time the application, whose communication was disconnected, will be informed. The **end** -to- **end** protocol will be re-implemented and the disrupted communication will be continued.

The base function...

...which guarantee that a disrupted data transfer can be continued efficiently. It makes sense to **keep** the connection open, if the same service is going to be used. If, for example...message have to be send and the correct transmission has to be confirmed by the **end** -to- **end** protocol, before another message can be received or transmitted.

There will be no facility for...

...transmission of several messages by the same or different applications (muliplex operation).

in order to **end** the communication the application sends a command to the base function to close the channel...

...partly change the contents as well, e.g. to incorporate the phone number of a **traffic telematics** center (Calling Line Identity (CLI)).

An application can enquire whether a certain communication service is implemented in the base **terminal** and whether the service is currently available. It is therefore important that the CST has as Supplementary Services
Initialization.

The table is **kept** in a volatile changeable **memory** and each time the device is switched on, the table is updated in accordance with the GMS module. If the base **terminal** software is implemented or downloaded or if the **terminal** is upgraded, the services, supported by the base **terminal** , are entered in the CST.

Updating.

Data services available in the network are only updated...

...2.2,11.4 Call Management
The Call Management performs two essential functions. Firstly, it **checks** incoming calls and determines whether they have been passed on by a **traffic telematics** center or whether ac
SUBSTWE SHEET (RULE 26)
cess to an external PC or FAX...

...of communication errors.

Examination of Incoming Calls
An incoming call can be addressed either to **traffic telematics** applications or to other applications such as PC applications, FAX etc. If the GSM module...

...the Calling Line Identity is supplied. In case the CLI is supplied it has to **check** whether it can be assigned to a **traffic telematics** center.

If it does, the call is accepted. (Continue with (4), although the examination of the **traffic telematics** identification is optional.) If it does not, the call is put through to the Standard Communications Interface (SCI).

(3) In case the CLI is not supplied the service is **checked** : If it is a FAX call, the call is put through to the SCI. Otherwise the call is accepted (continue with (4)).

(4) The call is accepted and it is **checked** whether a TT identification has been received (in the form of in-band-Information). If that is the case the received information will be passed on to the addressed **traffic telematics** application. If no TT identification exists, the information will be passed on the ...SHEE7 (RULE 26)
(A) In the case of TS 21 (SMS MT) the call management **checks** whether it can deduce the TT center from the originator number. If it can, the...

...the GSM standard. Deviations are possible depending on the priority of the application.

The CST **keeps** and manages information (redial meter with telephone number, time stamp and reason for refection) which the subsystem communication requires in order to **keep** to the restrictions for redials as laid down in the GSM recommendation 02 (Annex ,,Automatic...

...pass on to the applications.

Once the connection has been established, the procedure follows the **end** -to- **end** protocol described in the following chapter.
2,2,1,5 TASP4 **end** -to- **end** protocol
The Transport Application Security Protocol presents **end** -to- **end** security and its tasks correspond with those of the OSI protocol of level 4. It...

...such as TCP.

The TASP4 protocol is based on the LAPI3 protocol, wich can be **found** in the X Specification (7] (Level 2). The LAPB protocol was modified according to the by a **terminal** application with an example dialog in the service center Illustration 2 1-4 presents a...

...interface (application <-> base function). It shows the dependencies involved with special emphasis on the TASP4 **end** -to- **end** protocol. The dialog sequence in the base **terminal** is strictly defined while Lne center sequence is to be understood as an example.

Scope...

...header does therefore not include any address information.

Connection Control: The connection control includes those **elements** of the protocol which deal with a secure establishment and termination fo the **end** -to- **end** connection.

Acknowledged Information Transfer: The positive acknowlegement mechanism with time **check** guarantees that the packets reach the

receiver securely. Packets that are not acknowledged will be...

...Oriented Transmission Links: Transfer via line oriented transmission links is made possible by packet assembly (**Begin** -Flag + Length Indicator).

Transparence: Byte limits have to be adhered to; however, it is not...

...SHEET (RULE 26)
2 Base Functions in the Subsystem Location
One common feature of many **traffic telematics** applications is the necessity to locate the vehicle. The Global Positioning System (GPS) forms the...and translates them into a standard data set.

On request, applications have the following data **elements** at their disposal.
- date and time (LITC)
- geographical latitude
SUBSTITUTE SHEET (RULE 26)
- geographical longitude...Position (TOP)
- receiver specific data
- Pseudorange Data und Pseudorange Rate
There are always more data **elements** than an application actually needs. Each application chooses the **elements** it needs with the help of a bitmap and then puts in a request for these **elements** only. If several TT applications request different data **elements** , the whole set of data will be send to the application. A bitmap indicates which...

...goes clockwise. If the speed falls below a certain value (minimum speed), the speed is **recorded** as 0 m/s and the heading will appear as jnvalid". The minimum speed is...on the basis of the last n valid positions (n > 2) which have to be **stored** for this purpose. The minimum requirement is a linear approximation (i.e. n = 2).

As...

...position within which the defined altitude is still correct. The base function GPS base data **checks** whether the next position is still within that circle by analyzing the current speed and...

...application. Any conflicts in altitudes between different applications is to be solved within the base **terminal** . This can even lead to a situation where none of the altitudes can be used...

...mathematical basic functions which are put at the disposal of both other base functions and **traffic telematics** applications. The calculations are carried out in accordance with WGS 84.

The following mathematical functions but **save** time in calculation.

2 2.3 Base Function Approximation
Position approximation is used in those **keep** the calculation as simple as possible, it is recommended to determine the degree of the... incrementation and decrementation.

Incrementation means that the wayiength meter is adjusted to zero before the **start** . With each new position the distance to the preceding position (aerial connection) is calculated and...that increments in segments of one meter each.
This will be initialized when the base **terminal** is put in operation

with a value set at 0 meter and it will remain active during the entire time of operation. It the **terminal** is switched off and switched on again, the meter reading remains the same. Neither the base **terminal** nor the applications can stop or put back this waylength meter. The applications can explicitly...out by using the base function geometry.

The first variant of the waypoint, which the **traffic telematics** application determines, is defined by setting a center point and a radius. The second variant...

...actual position the base function calculates the distance to the center of the waypoint and **compares** this with the extension of the waypoint.

If the vehicle arrives at the inner area...

...TOP value TOP (x), TOP (y)) the calculation is based. In particular, the application will **find** out whether the calculation is based on actually measured or approximated positions.

If the vehicle...The TT chipcard performs several important tasks to guarantee the smooth operation of the the **traffic telematics** system as a whole. These tasks include releasing new **traffic telematics** services, **checking** the authenticity of a participant, securing the communication **path** between base **terminal** and center and tolling via a local electronic purse.

The subsystem access control (Chipcard Interface...

...chipcard.

The base functions listed above allow a communication between the applications situated in the **terminal** and the Chipcard Interface Module (CIM), ...it is possible to employ a multi-functional 1ntraGSM chipcard that allows access to numerous **traffic telematics** applications.

The Chipcard Interface Module can in principle be employed by several applications at the...

...Functions of the Subsystem Input/Output
Input/output functions are required to operate the base **terminal** . These are necessary both in order to gain access to the **traffic telematics** applications and for the administration of the base **terminal** . It is recommended that the number of input/output units are **kept** to a minimum. Moreover, it has to be possible to implement additional input/output devices...

...and suitability for use, in order to guarantee a smooth running of the application.

Individual **components** of the base **terminal** may already possess a possibility for input and output, e.g. a GSM mobile phone may be implemented in the **terminal** . It is desirable to use these modules as an input/output unit. Obviously, because of...

...and external traffic telernatics applications can therefore employ both input/output units integrated in the **terminal** and external ones as well.

The user will have two functions at his or her...

...device (see illustration 2 4-3).

2.2,4,1 Base Function ,Display Information"
Each **traffic telematics** application has different requirements regarding the presentation of information. These includes the presentation of graphics...26)
new its request to display the information. In this case the application has to **store** the most recent information it wants to display.

An information of high priority can interrupt...can be used universally with the help of an interpreter, because differen variants of operating **elements** have been implemented. As in the case of the display medium a distinction has to...higher priority. If that happens it is the responsibility of the subsystem input/output to **store** the input request and the information that the user has entered up to that point...

...priority of the output request changes and falls below that of the input request, the **stored** input request is presented again. Input and output requests are treated differently because it is...

...System Control
2.2,5.1 Routing
Routing is a central function of the base **terminal** . It links the API interface with the base functions. It performs the tasks of the...

...interface (see chapter 3 1).
If an application tries to gain access to a faulty **component** of the **terminal** , it will receive an error message issued by the system control.

Routing from base functions...means of an internal allocation of addresses; its function is to evaluate and pass on **source** and **destination** addresses in the superfrarne of a message (see chapter 3 1).

It the routing function...

...contained in the message (the AS[is the same for all the service centers and **terminal** applications) and determine the appropriate **destination** address in the **terminal** in order to pass the message on. In the case of a message being transferred from a **terminal** application to a service center, the procedure is the same, i.e. the message contained...

...directly to the subsystem input/output.

2 5.2 System Control
To operate the base **terminal** functions are necessary that run independently from the traffic telernatics applications. These functions are.
SUBSTMJTE...

...and control of status (hardware and software)
built-in test and diagnosis
power management (warm **start** , cold **start** , power down, emergency shut down)
software versions management
error management
The majority of functions will be implemented by the manufacturer in accordance with the **terminal** structure. The base functions for this complex of functions have as yet to be described in detail.

Error Management
The error management covers all measures that are taken to recognize, **record** and correct errors and to inform the user. It includes status request and status control...

...restart).

The watchdog supervises all applications that have been registered and, if necessary, resets them.
Keeping an error protocol
SUBSTMJTE SHEET (RULE 26)
ro
A base function is to be implemented in order to **record** errors which occur in the base **terminal** .

If an error is discovered the base function is informed. When addressing the base function...

...transferred, which will be filed into the error protocol.

Possible parameter are
- time stamp,
- error **code** ,
- error classification,
- faulty **component** (hardware unit, software module) and
- measures introduced to correct errors.

The error log book can...application requires access to the same resource. Besides the system's internal resources such as **memory** and computing time the applications also need access to the base functions. The management of...
...different manufacturers (i. e. the waypoint algorithm is used jointly by the application modules dynamic **route** guidance and floating car data acquisition).

Besides the software interface a universial cost-efficient hardware...
General structure.

<SRC>, <DEST>,<TRANS
N0>, <PRIO>, <TIME>, <message>
Description.

<SRC>: the identifier of the **source** of the super frame. It indicates the application or the base function initiating the transfer of the super frame.

<DEST>: the identifier of the **destination** of the super frame. It indicates the application or the base function that is to...function GSM dialog
3 3.1 Message ,gsm
open.request"
Message name: ,gsm
open
req"
Source : application
Destination : base function gsm dialog
Reply: ,gsrn
open
confirrnation"
Description: This message is used by the...diaI

string>, in case of Bearer Services the parameters
<speed>, <name> and <ce>. The data **elements** <speed>, <name> and
<ce> and their possible values correspond to chapter 6.7 of GSIVI...

...all possible traffic tele
matics applications. As a minimum values must be
defined for.

- dynamic **route** guidance
- floating car data acquisition
- fleet management

SUBSTMJTE SHEET (RULE 26)
io
- traffic information
- emergency...

...chapter 6.7 of
GSM 07.07)are.

0 - asynchronous modem
<ce>: selection of connection **element**
values (as defined in chapter 6.7 of GSM 07.07)
possible values are.

0...

...SHEET (RULE 26)
3 3.2 Message ,gsrn-open-confirmation"
Message name: ,gsm-open
con"
Source : base function gsm dialog
Destination : requesting application
Description: This message is used to confirm that a logical channel is
opened...3 3.3 Message,,gsm-openjndication"
Message name: ,gsm
open-ind"
SIUBSTFUTE SHEET (RULE 26)
Source : base function gsm dialog
Destination : application
Description: This message is used by the base function to indicate to the
destination application that a service center wants to send data.

If the service center originates a connection-oriented communication,
the base function receives an identifier for the **destination**
application.

The base function opens a logical communication channel to this appli
cation and sends...

...service center.

If a service center call using SMS is received by the traffic teiernatics
terminal , a logical communication channel to the **destination**
application
is established by the base function as well. Again the application has to
confirm...

...requested communication
3.2,3.4 Message gsm
open
response"

Message name: ,gsm open res"
Source : application
SUBS=E SHEET (RULE 26)
Destination : base function gsm dialog
Description: This message is used to confirm to the base function...

...requested communication
3.2,3.5 Message ,gsm-data-request"
Message name: ,gsm-data-req"
Source : application
Destination : base function gsm dialog
Reply: ,gsm
data-con"
Description: With this message data to be...

...the service center
3,2,3,6 Message ,gsmijata-confirmation"
Message name: ,gsm-data-con"
Source : base function gsm dialog
Destination : requesting application
Description: This message ...oriented
communication a confirmation of the delivery to the service center is
given by the **end** -to- **end** protocol.

Syntax: <msg
id>, <channel-no>
Defined values: <msg
id>: to be defined
SUBSTWE SHEET...

...SHEET (RULE 26)
.2,3.7 Message gsm
data.indication"
Message name: ,gsm-data-ind"
Source : base function gsm dialog
Destination : application
Description: With this message an application is informed about a message
received
from a...

...an application.

The base function receives this data of the service center and identifies
the **destination** application. If there is already a logical channel
opened to this application the data are...

...to the
application.

When within an existing communication a service center sends data to
the **terminal** equipment, the base function receives this data and
identifies the **destination** application the data has to be sent to.

If within an existing communication the **destination** application already
has an open communication channel this channel number is part of the
,,gsm
data
ind"-message. If the **destination** application doesn't have an
open communication channel a new logical communication channel is
generated...

...the base function confirms the connection automatically and generates a logical communication channel to the **destination** application. After the
service center has sent the data, the base function sends a
,,gsm
data
ind"-message to the **destination** application.

SUBSTMITE SHEET (RUI F 26)
When a service center originates a connectionless communication the...

...generates a new logical communication
channel and sends a ,gsm
data
ind"-message to the **destination** appli
cation. A ,gsm
get-data
con"-message is sent from the application to
the sent to **destination** application
3 3.8 Message gsm.status-indication"
Message name: ,gsm-status-ind"
Source : base function gsm dialog
Destination : application
SUBSTMJTE SHEET (RULE 26)
610
Description: This message is used to inform the application...
...SUBSTMITE SHEET (RULE 26)
,2 9 Message gsm.close-request"
Message name: ,gsm-close-req"
Source : application
Destination : base function gsm dialog
Reply: ,gsm-close-con"
,,gsm-status-ind"
Description: This message is...

...the base function. A con
nected communication line is disconnected immediately if no other
communication **path** (logical channel) is opened.

Syntax: <msg id>, <channel no>
Defined values: <msg
id> to be...

...the requested communication
3 3.10 Message ,gsm
cIose
confirmatiion"
Message name: ,gsm
close-con"
Source : base function gsm dialog
Destination : application
SUBSTWE SHEET (RULE 26)
Description: This message is used to confirm to the requesting...

...The communication with the service center
has been terminated in case of no other communication **path** (logical
channel) was opened.

Syntax: <msg

id>, <channel-no>
Defined values: <msg
id> to be...

...the requested communication
3,2 11 Message gsm-close-lindication"
Message name: ,gsm-close-ind"
Source : base function gsm dialog
Destination : application
Description: This message is used by the base function to indicate to an application...
...center wants to disconnect a connection-oriented communication a close request is sent to the **traffic telematics terminal** . When the **end** -to- **end** protocoll of the base function receives this request, a confirmation is sent immediately to the...3,2.3,12 Message ,gsm AT.command
request"
Message name: ,gsm-AT-command-req"
Source : application
Destination : base tunction gsm indirect AT-command access
Reply: ,gsm-AT-command-res"
Description: This message...

...3,2.3,13 Message ,gsm AT-Command-response"
Message name: ,gsm-AT-command-res"
Source : base function gsm indirect AT-command access
Destination : concerned application
Description: This message is used by the GSM base functions to send the ...

...3-14 Message,,gsm-write.service-table-request"
Message name: ,gsm-Write-service-table-req"
Source : application
Destination : base function gsm communication service table access"
Description: This message is used to write/change...

...is required. The command can be used
in parallel to opened channels.

Syntax: <msg-id>, < **object** >, <service>, <status>, <data>
Defined values: <msg
id> to be defined
< **object** > selector for <service>
recommended values are.

1 - network
2 - GSM-module
3 - subscriber
4 - call...

...selector for service or dial
string information
recommendation for requested values are.

in case of < **object** > value is 1,2 or 3 the availability
can be set for.

- BS24
- BS26
- TS1...

...RULE 26)
TS22
TS23
GPRS/PDS
CLIP
CUR
COLP
COLR
Call Wait
in case of < **object** > value is 4, the value of
<service> is the dial-string for which the call set to a specific value
- dial-string for,cali repeat counter'
in case of < **object** > value is 5, the value of
<service> is the application-id for which the
calling...
...data to be written to the communication service table.

recommended values are.

in case of < **object** > value is 1,2 or 3, following
values are recommended
0 - unknown
1 - available
2 - notavailable
in case of < **object** > value is 4, following values
are recommended
- value of call repeat counter
in case of < **object** > value is 5, following values
are recommended
,,calling
iine-identity" for service center appli
cation...

...2 15 Message ,gsm.read.service.table-request"
Message name: ,gsm
read
service
table
req"
Source : application
Destination : base function gsm communication service table access"
Reply: ,gsm
read-service-table-res"
Description: This...

...be used in parallel to opened channels,
SUBSTMJTE SHEET (RULE 26)
L
Syntax: <msg
id>, < **object** >, <service/dial-string>
Defined values: <msg-id> to be defined
< **object** > selector for <service>
recommended values are.

1 - network
2 - GSM-module
3 - subscriber
4 - call...
...string> requested service or dial-string information

recommendation for requested values are.

in case of < **object** > value is 1 2 or 3 service informations can be requested for.

- BS24
-BS26
-TS1 1
-TS21
-TS22
-TS23
-GPRS/PDS
-CLIP
-CUR
-COLP
-COLR
-Call Wait
in case of < **object** > value is 4 the call repeat counter values for a specific dial-string can be reque sted
- dial-string for,call repeat information"
in case of < **object** > value is 5 the calling line identity of a specific service center for a traffic...

...3,16 Message ,gsm
read.service-table-response"
Message name: ,gsrn
read
service
tabIe
res"
Source : base function gsm communication service table access SUBSTWE SHEET (RULE 26)
Destination : application
Description: This message is used to send the result of a ,,gsm-read-service...

...release
cause <reason>. If the calling line identity of a specific service center for
a **traffic** **telematics** application is requested, the message also contains
a calling line identity <CLI>.
Syntax: <msg
id...handled with the following messages.

related to GPS base function GPS base data.

- gps
data- **start** -request
-gps
data-indication
-gps-data-stop
request
-gps
send daps correct indication
-gp$
data...

...backward-request
- gpE@

approx-data-backward-indication
related to GPS base function waylenght.

- gps
waylength
start -request
-gps
waylength
request
-gps-waylenght-indication
-gps
waylength
stop
request
-gps-wayiength
global-request
-gps-waylenght
global
indication
related to GPS base function waypoint.

- gps
waypoint- **start** -request
- gps
waypoint-status-indication
- gps
waypoint
stop
request
suBsTmm sHEEr (RULE 26)
Some examples...

...the GPS base function waypoint
SUBSTMITE SHEET (RULE 26)
3,2 1 Message "ps
data- **start** -request"
Message name: "gps
data
start -req"
Source : application (or other base function)
Destination : base function gps base data
Description: This message is used to request the GPS data...

...following every <firne-cliff> seconds.

With the bitmap <mask> the application specifies the specific data
elements of the whole GPS data set which are needed.
Syntax: <msg
id>, <par>, <Iime
dift...

...time duration between two requested GPS data
sets
<mask> bitmap that indicates the specific data **elements**
which are requested by the application. The whole
GPS base data set contains the **elements** .

date,
time (UTC),
geographic longitude,

geographic latitude,
SUBSTMJTE SHEET (RUI F 26)
height (Measured Sea...data,
pseudorange rate
3,2 2 Message "gps
data
indication"
Message name: "gps
data-ind"
Source : base function gps base data
Destination : application (or other base function)
Description: This message is used to send the specific data **elements** <data-set> of the current GPS data set which are requested by the application(s...

...approximated positions of the
SUBSTRWE SHEET (RULE 26)
G3
base function approximation. The specific data **elements** that are sent are chosen by the requesting application (see message ,,gpsLdata- **start** -req") and indicated by the bitmap <mask>.

It more than one application request data **elements** of the GPS data set, all requested data **elements** are sent to all applications by this one mes
sage. The specific data **elements** that are sent are indicated with the bitmap <maslc>. Each application needs to select those data **elements** that it has requested.

If the parameter <par> of the message ,gpsLdata- **start** -req" has the value 1 , also the data **elements** of the following GPS data sets, specified by the bitmap <masIc>, are sent every <time...

...set>
Defined values: <msg
id>: to be defined
<mask> bitmap that indicates the specific data **elements** of the whole GPS data set that are sent.

<data-set>: specific data **elements** of the whole GPS data set indicated by the bitmap <mask>
3 4.3 Message "gps
data-stop
request"
Message name: "gps
data
stop
req"
Source : application (or other base function)
Destination : base function gps base data
SUBSTMUTE SHEET (RULE 26)
Description: This message is used to...
...3.2,4A Message ,gps@
send-dgps@
correct-indication"
Message name: ,gps
send-dgpsLcorrect-ind"
Source : base function gsm dialog or application
Destination : base function gps base data
Description: If an application can provide for correction data (DGPS...

...set-height-request"
SUBSTWE SHEET (RULE 26)
Or
Message name: "gps
data-set
height
req"
Source : application (or other base function)
Destination : base function gps base data
Description: If an application knows the exact height of the...position in which the fixed height is still exact.

The base function GPS base data **checks** by evaluating the current velocity and the time step if the following position is still...

...more accurate GPS position with this additional information.

With every new GPS data set this **check** is repeated. If the next position
is outside the circle the base function deletes the...

...4.6 Message "ps-data-dell-height-request"
Message name: gps data del height req"
Source : application (or other base function)
Destination : base function gps base data
Description: With this message the application that has fixed the...

...to be deleted
3 4.7 Message "gps
geornetry
requesV
Message name: IIgps@
geometry
reqI'
Source : application (or other base function)
Destination : base function geometry
Description: This message is used to request the distance or angle between...

...SHEET (RULE 26)
3 4.8 Message "gps
geometry
indication"
Message name: "gps
geometry ind"
Source : base function geometry
Destination : application (or other base function)
Description: This message is used to send the result(s...4.9 Message "gps approx-data-backward-request"
Message name: "gps
approx-data-backward
req"
Source : application (or other base function)
Destination : base function approximation
SUBSTMJTE SHEET (RULE 26)
Description: After receiving forward approximated or invalid positions...
...the gap with this message.

With the bitmap <mask> the application specifies the specific data

elements of the whole GPS data set which are needed.

Syntax: <msg
id>, <time-diff>, <mask...

...time duration between two requested GPS data
sets
<mask> bitmap that indicates the specific data **elements**
which are requested by the application. The whole
GPS base data set contains the **elements** .

date,
time (LITC),
geographic longitude,
geographic latitude,
height (Measured Sea Level),
Horizontal Dilution of Precision...

...data-backward-indication"
SUB9WE SHEET (RULE 26)
Message name: "gps@-approx-data-backward-ind'I
Source : base function approximation
Destination : application (or other base function)
Description: With this message the base function GPS base data...

...N-pos backward approximated positions of the latest gap to the
application.

The specific data **elements** that are sent are chosen by the requesting
application (see message,,gp@
approx-data-backward...

...pos>
Defined values: <msg
id>: to be defined
<mask> bitmap that indicates the specific data **elements** of
the backward approximated GPS data sets. The
bitmap is valid for each of the...

...the backward approximated data sets that are sent.
Each data set contains the specific data **elements**
that are indicated by the bitmap <masIc>
SUBS=E SHEET (RULE 26)
,2 11 Message "gps-waylength
start -request"
Message name: 1'gps
wayIength
start
reql1
Source : application (or other base function)
Destination : base function waylength
Description: This message is used to reset the waylength counter on the
...m and 50 m of the whole
wayiength left to cover. Then the application sets < **start**
vaI>
- <
2000m> and <val
1 , val-2, val
3, val-4> =
< -200m, -1 00 m...

...meters". It is stopped at a fixed maximum
value, too.

Syntax: <msg
id>, <counter-id>, < **start** -val>, <n>, <vaI
1,vaI
2,...,vaI
n>
Defined values: <msg
id>: to be defined
<counter-id> counter ID set by the application
< **start** -vat> **start** value of the waylength counter. It is 0 meters
for incrementation or a fixed waylength...

...n>: counter marks
3 4,12 Message "glps-waylength-request"
Message name: "gps
waylength-req"
Source : application (or other base function)
Destination : base function waylength
Description: This message is used to request the current counter value of
...
...id> counter ID
3 4.13 Message "gps
wayIength
indicatlion"
Message name: "gps
waylength
ind"
Source : base function waylength
Destination : application (or other base function)
Description: This message is used to send the current counter...

...one of
the marks <val- 1 , val-2, ..., val-n> of the message
,,gps
wayIength- **start** -req".

Syntax: <msg-id>, <counter-id>, <counter-value>
SU13STMJTE SHEET (RULE 26)
Defined values: <msg...

...value
3,2 14 Message "gps
wayIength
stop
request"
Message name: "gps-waylength
stop
req"
Source : application (or other base function)
Destination : base function waylength
Description: This message is used to stop the waylength counter. If the
26)
SS
Message name: "gps-waylength
giobal
req"
Source : application (or other base function)

Destination : base function waylength
Description: This message is used to request the current counter value of
...

...defined
3,2 16 Message "gps@
wayiength.global-indication"
Message name: "glps
waylength
global.ind"
Source : base function waylength
Destination : application (or other base function)
Description: This message is used to send the current counter...

...value of the global
waylength counter
SUBSTTTUTE SHEET (RULE 26)
4.17 Message "gps
waypoint- **start**
request"
Message name: "gpsLwaypoint- **start** -req"
Source : application (or other base function)
Destination : base function waypoint
Description: This message is used to initialize the base function "gps
waypoint...

...initialized
3 4.18 Message "gps-waypoint-status-indication"
Message name: "gps-waypoint-Status-ind"
Source : base function waypoint
Destination : application (or other base function)
SUBSTMITE SHEET (RULE 26)
Se
Description: First this message is...position
3 4.19 Message "gps
waypoint
stop
request"
Message name: "gps-waypoint-stop-req"
Source : application (or other base function)
Destination : base function waypoint
Description: This message is used to stop the waypoint calculation. If
the...

...RULE 26)
5,1 Message "cim.open.application.request"
Message name: "cim
open
application-req"
Source : application
Destination : base function CIM open application
Reply: "cim
open
application
con" (open confirmation either positive or...

...2,5.2 Message "cim.open-application-confirmation'I
Message name: "cim open application con"
Source : base function CIM open application
Destination : requesting application

Description: This message is used to confirm that a logical channel is
...Message "cim-send-datajequest"
Message name: "cim-send-data-req"
SUIBSTMJTE SHEET (RULE 26)
/as
Source : application
Destination : base function CIM command data transfer
Reply: "cim-send-data-res" (answer of the chipcard...

...chipcard
3 5.4 Message "ciim.send.data.response"
Message name: "cirn-send-data-res"
Source : base function CIM command data transfer
SUBSTITUTE SHEET (RULE 26)
jv@
Destination : application
Description: With this message the response data of the chipcard is sent
to the...

...the chipcard
3,2.5,5 Message "cim-status-request"
Message name: "cim-status-req"
Source : application
Destination : base function CIM command data transfer
Reply: d4cim status ind"
Description: This message is used...

...to be defined
3 5.6 Message "clim-status-indication"
Message name: "cim-status-ind"
Source : base function CIM command data transfer
Destination : application
Description: This message is used to inform the application about an
error or an...26)
3 5.7 Message "cim.close-application
request"'
Message name: dicirn close application req"
Source : application
Destination : base function CIM close application
Description: This message is used by the application to close...

...2,5,8 Message "cim-close-application-confirmation"
Message name: 14 cirn close application con"
Source : base function cirn CIM close application
Destination : application
Description: This message is used to confirm to the requesting
application that the
logical...26)
3 6.1 Message ,io
display
information-request"
Message name: ,io
display-information-req
Source : application or any other base function
Destination : base function io display information
Reply: Jo
display
information-con" (request confirmation)
,,io
display

information...2,6.2 Message g,io-displayinformation-reject'I
Message name: ,io-display
intormation-reill
Source : base function io display information
Destination : requesting application or base function
Reply: none
Description: An io-display
intormation
reject message is...

...3.2,6.3 Message 7io
display
information-confirmationo'
Message name: ,io-display
information-con"
Source : base function io display information
Destination : requesting application or base function
Reply: none
Description: In case of the display operational and...
...queue
3 6.4 Message ,io-display
information-interruption"
Message name: ,io
display
information-int"
Source : base function io display information
SUBS=E SHEET (RULE 26)
Destination : requesting application or base function
Reply: none
Description: If an io-display
information-request of...

...RULE 26)
3 6,5 Message ggio-display
information-acknowledge"
Message name: JoJisplay
information-ack"
Source : base function io display information
Destination : requesting application or base function
Reply: none
Description: When the information is displayed over a...
...6.6 Message ,io-display
information-finish
request"
Message name: Jo display information finish req"
Source : requesting application or base function
SUBSTMJTE SHEET (RULE 26)
Destination : base function io display information
Reply: ,io
display-information-finish-acW'
Description: With this message...

...6.7 Message ,io-display
information-finish-acknowledge"
Message name: ,io
display-information-finish-acW'
Source : base function io display information
Destination : requesting application or base function
Reply: none
Description: When the actions requested with io-display...

...26)
3 6.8 Message jo
display
type
request"
Message name: Jo-display
type
req"
Source : requesting application or base function
Destination : base function io display information
Reply: ,io-display
type-res"
Description: With this message the...displayed
3 6.9 Message jo-display
type-result"
Message name: jo
display
type
res"
Source : base function io display information
Destination : requesting application or base function
Reply: none
SUBSTWE SHEET (RULE 26)
q
Description: With this...

...applications
3 6.10 Message jo-input-device-request"
Message name: ,io-input
device
req"
Source : requesting application or base function
Destination : base function io enter data
Reply: jo
input
device
acW'
jo
input
device
rej11
Description...

...or a base function want to request for input data, first it has to be **checked** whether the input device is accessible or in use for an other application. An io...
...detachfrominputdevice
3 6.11 Message Jo-input-device-acknowledge"
Message name: Jo-input-device-ack"
Source : base function io enter data
Destination : requesting application or base
Reply: none
Description: This message is the response of an io...

...defined
3 6.12 Message Jo
input-device-reject"
Message name: ,io
input

device
rej"
Source : base function io enter data
Destination : requesting application or base function
Reply: none
Description: This message is the response of an...

...26)
3 6.13 Message Jo-enter-data-request"
Message name: Jo-enter-data
req"
Source : requesting application or base function
Destination : base function io enter data
Reply: jo-enter-data-con"
,,io-enter-data-res"
jo...

...function needs input data from the user it has to perform the following actions.

a. **check** whether the input device is accessible an at
tach (io
input
device
req)
b. display...character with a respective io-enter-data-resmessage to the application. The application now can **check** the cha
racter and decide about sending a new Jnput-data" message (i. e. the...pt
3 6.14 Message jo-enter-data-confirmation"
Message name: jo
enter-data-con"
Source : base function io enter data
SUBSTMJTE SHEET (RULE 26)
)32.

Destination : requesting application or base function
Reply: none
Description: When an application requests for input data...

...defined
3 6.15 Message jo-enter-data-acknowledge"
Message name: jo
enter-data
acW'
Source : base function io enter data
Destination : requesting application or base function
Reply: none
Description: When an user has entered the requested...

...be defined
3 6.16 Messagejo enter data result"
Message name: Jo-enter-data-res"
Source : base function io enter data
Destination : requesting application or base function
Reply: none
Description: With the parameter <Iype> of the io...

...character with a respective io-enter-data-resmessage to the application. The application now can **check** the cha
racter and decide about sending a new,Jnput-data" message (i. e. the...

...data
3 6.17 Message Jo-enter-data-reject"
Message name: Jo-enter-data-reill
Source : base function io enter data
Destination : requesting application or ...operational
3 6.18 Message Jo-enter-data-indication"
Message name: Jo-enter-data-ind"
Source : base function io enter data
Destination : requesting application or base function
Reply: none
Description: If the user pushes an event-key...

...application which interprets the user action and initiates for application actions.
Syntax: <msg-id>, <key
code >, <req
status>
Defined values <msg id> to be defined
<key
code > identifier for the key the user had entered
possible values are.

menue - key for entering...

...26)
6.19 Message ,io-input-device-type
request64
Message name: Jo-input-device-typejecl"
Source : requesting application or base function
Destination : base function io enter data
Reply: jo-input-device-type
res"
Description: With this message...

...6.20 Message ,io-input-device-type@
result"
Message name: Jo-input-device-type
res"
Source : base function io enter data
Destination : requesting application or base function
Reply: none
SUBSTRUTE SHEET (RULE 26)
Description: With this message...

...An external device may be a further Traffic Telernatics application, another Input/OutputDevice, a facsimile **terminal** , a PC or an adaptable car bus system, e.g. the CAN bus.

Some PC based applications can use the direct communication **path** provided by the GSM module. Other PC based applications may be connected to allow access to the internal units of the basic device: for example to **start** and monitor diagnostic functions or to read the error log (by service staff only).

It...

...to connect the external bus to the API.
4A The SCI module and the communication **paths**
All external devices have a single common access to the API via the SCI

module...

...see Picture 4 1). For this purpose there is a switch to control the connection **path** . The switch position in the picture is for normal connection to the API. Another switch...in a ,direct access" via the communication module and the AR to the GSM radio **path** .

Illustration 4 1: Standard Communications Interface (SCI)
The SCI module has the task of managing...

...defined in GSM 04.08).

These reasons are classified in three major categories.

1 . "Busy **destination** ".

Cause number 17 User busy
2. "Unobtainable **destination** - temporary".

Cause number 1 Unassigned (unallocated) number
3 No **route** to **destination**
22 Number changed
28 Invalid number format (uncomplete number)
38 Network out of order.

1 8 No user responding
1 9 User alerting, no answer
27 **Destination** out of order
34 No circuit/channel available
41 Temporary failure
42 Switching Equipment congestion
44 Requested circuit/channel not available
47 Resources unavailable, unspecified
3. "Unobtainable **destination** - permanent/long term".

Cause number
NOTE: Optionally, it is allowed to implement cause number 27...

...for category 3, n shall be 1.

Call attempt Minimum duration between call at
tempts
Initial call attempt
1 st repeat attempt 5 sec
2nd repeat attempt 1 min
3rd repeat...Sequence see illustration 2 1-5
Illustration 2 1-5: Framework of the TASP4 level
Begin Flag
The **Begin** -Flag marks the **beginning** of the frame. It consists of the bit sequence 01 1 1 1 1 1 0, There will be no **End** -Flag. The **end** of the message will be indicated by means of a length indicator.

The **Begin** Flag is not normally part of level 4; however, it makes possible the line oriented transfer on **routes** without a leve 2 protocol (transparent data channel).

LAPB address field not necessary
Since only...

...U- format) (see illustration 2 1-6).

Illustration 2 1-6: Control Field
N(S) **Transmitter** send sequence number
N(R) **Transmitter** receive sequence number
I Information frame
S Supervisory frames
U Unnumbered frames
PIF Poll bit when issued as a command, Final bit when issued as a response The exact bit **coding** is shown in illustration 2 1.-7; it corresponds to the LAP6 format.

Illustration 2 1-7: **Coding** according to the LAPB format
I Information
RR Receive Ready
RNR Receive Not Ready
REJ...

...Balanced Mode
DM Disconnect Mode
Ul Unnumbered Information
DISC Disconnect
UA Unnumbered Acknowledge
N(S) **Transmitter** send sequence number
N(R) **Transmitter** receive sequence number
P/F Poll bit when issued as a command, when issued as...field.
It a data field is between 0 and 31 octet in length, the following **coding** of the length field (illustration 2 1-9) is sufficient. The EL-Bit is here...

...the data of the application level, It can be as long as 4095 octet.

Frame **Check** Sequence field
The Frame **Check** Sequence field is two octet in length.

SUBSTWE SHEET (RULE 26)
Ira
The generator polynom...

...gp!@ .....

cim .....

cirn .....

Cim .....

io .....
io .....

io .....

Ox 1 000 ... Oxi OFF applications for dynamic **route** guidance
Ox1 1 00 ... Ox11FF applications for floating car data acquisition
00200 ... Ox12FF applications for...31 European Telecommunications Standards Institute: ,European digital
cellular telecommunications system (Phase 2); Use of Data **Terminal** Equipment - Data Circuit terminating Equipment (DTE - DCE) inter face for Short Message Service (SMS) and...

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(CCITT): X25, Interface between Data **Terminal** Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for terminals opera ting in the Packet...
...Line Identity Presentation
CLIR Calling Line Identity Restriction
CPU Central Processing Unit
CRC Cyclic Redundancy **Check**
CST Communications Service Table
DGPS Differential Global Positioning System
DISC Disconnect-Message
EPE Estimated Position...

...1/0 Input/Output
LAPB Line Access Procedure on the B-channel
MCC Mobile Country **Code**
MNC Mobile Network **Code**
MO Mobile Originated
MOC Mobile Originated Call
MT Mobile Terminated
MTC Mobile Terminated Call
OSI Application Security Protocol
TCP Transport Communications Protocol
TOP Type of Position
TS Teleservice
VT **Traffic Telematics** (Verkehrstelematik)
SUBSTMJTE SHEET (RULE 26)
I s-61
Traffic Telematics System

Claim
1 **Traff**ic telematics system
characterized in that the **traffic telematics** system contains one or more subsystems.

2 **Traffic telematics** system according to claim 1 1
characterized in that the system contains at least one communication subsystem.

3 **Traffic telematics** system according to claim 1 or 2,
characterized in that the system contains at least one navigation subsystem.

4 Method for use in a **traffic telematics** system,
characterized in that base functions of a base system are used to run and